

REMARKS

This amendment is responsive to the Office Action dated September 5, 2002. Claims 1-20 were previously pending in the above-referenced patent application, and subject to rejection.

In this response, Claims 4 and 14 have been canceled and new Claims 21-22 have been added. No new matter has been added. The total amount of independent and dependent claims remains the same, and additional fees are not due.

A request for a one month extension of time is enclosed herein, along with the appropriate fee.

Please charge any additional fees or credit any overpayment to our Deposit Account No. 19-1995. A duplicate copy of this letter is enclosed for that purpose.

In the Office Action, Claims 1-3 and 7 were rejected under 35 U.S.C. 102(b) as being anticipated by Fincham, USPN 5,548,657 (hereinafter "Fincham"). Claims 1-3, 7-11 and 15-19 were rejected under 35 U.S.C. 102(b) as being anticipated by Esposto, USPN 5,339,286 (hereinafter "Esposto"). Claims 4-6 were rejected under 35 U.S.C. 103(a) as being unpatentable over Fincham in view of Paddock, USPN 5,604,815 (hereinafter "Paddock"). Claims 12-14 were rejected under 35 U.S.C. 103(a) over Fincham in view of Kosatos et al., USPN 5,894,524 (hereinafter "Kosatos"). Claim 20 was rejected under 35 U.S.C. 103(a) as being unpatentable over Esposto and Fincham, further in view of Paddock.

CLAIM REJECTIONS

I. Fincham and Claim 1

The rejection of Claims 1-3 and 7 under 35 USC 102(b) as being anticipated by Fincham is respectfully traversed because the claims currently include limitations neither taught nor suggested by Fincham. For example, as per Claim 1, Fincham does not teach or suggest a high frequency transducer comprising a first diaphragm having a first coil thereon, and "a second diaphragm having a second coil thereon formed on a periphery of said first diaphragm" (Claim 1). By contrast, as shown and described in Fincham, the second coil 24 is not around a periphery of the first diaphragm 34.

Further, Fincham does not teach or suggest a first seat having a first magnet structure, "said first seat defining an annular opening to allow said second coil to be moveably suspended therein" (Claim 1). By contrast, element 19-20 in Fincham is a backplate 19 and an inner pole 20 (Col. 3, lines 53-57), and not a seat as required by Claim 1. Further, element 19-20 does not define an annular opening of any sort. And, element 19-20 does not provide an annular opening to allow said second coil to be moveably suspended therein.

Fincham does not teach or suggest a second seat having a second magnet structure, "said second seat and said second magnet defining an annular gap to allow said first coil to be moveably suspended therein" (Claim 1). By contrast, the magnetic structure 28 in Fincham does

not define an annular gap in relation to a second magnet for the first coil to be moveably suspended therein. If the Patent and Trademark Office believes otherwise, Applicants respectfully request that the Patent and Trademark Office refer to specific teachings in Fincham that show all of the above limitations of Claim 1. Therefore, it is respectfully suggested that the rejection of Claim 1, and all claims dependent therefrom, should be withdrawn.

II. Fincham and Claims 2-3 and 7

As per Claims 2-3 and 7, Applicants submit that Fincham does not teach or suggest that “the first and second magnets are substantially disk shaped” (Claim 2) and that “the first and second magnets are substantially flat” (Claim 3). By contrast, in Fincham an annular magnet shape is used (Col. 3, lines 53-57).

Further, Applicants submit that Fincham does not teach or suggest that “said first and second magnets are neodymium iron boron magnets” (Claim 7). By contrast in Fincham barium ferrite is used (Col. 3, lines 53-57), not neodymium iron boron for both first and second magnets as required by Claim 7. If the Patent and Trademark Office believes otherwise, Applicants respectfully request that the Patent and Trademark Office refer to specific teachings in Fincham that show all of the above limitations of each of the Claims 2-3 and 7. Therefore, it is respectfully suggested that rejection of Claims 2-3, 7 and all claims dependent therefrom, should be withdrawn.

III. Esposto and Claims 1-3, 7-11 and 15-19

Rejection of Claims 1-3, 7-11 and 15-19 under 35 USC §102(b) as being anticipated by Esposto is respectfully traversed because the claims include limitations neither taught nor suggested by Esposto. For example, as per Claim 1, Esposto does not teach or suggest a high frequency transducer comprising a first diaphragm having a first coil thereon, and "a second diaphragm having a second coil thereon formed on a periphery of said first diaphragm" (Claim 1). By contrast, as shown and described in Esposto, the second coil 7 is not around a periphery of the first diaphragm 11.

Esposto does not teach or suggest "a first seat having a first magnet structure, said first seat defining an annular opening to allow said second coil to be moveably suspended therein" (Claim 1). By contrast, as shown in Fig. 1 of Esposto, element 1 does not define an annular opening in which a coil is moveably suspended, and coil 7 is not suspended in such an annular opening.

Esposto does not teach or suggest "a second seat" having "a second magnet structure" (Claim 1). The Office Action has not specified as such. Esposto does not teach or suggest "the second seat and said second magnet defining an annular gap" wherein the purpose of the gap is "to allow said first coil to be moveably suspended therein" (Claim 1). By contrast, as shown in Fig. 1 of Esposto, element 14 does not define an annular gap in which said first coil is moveably

suspended, and coil 13 is not suspended in such an annular gap. If the Examiner believes otherwise, Applicants respectfully request that the Examiner refer to specific teachings in Esposto that show all of the above limitations of Claim 1. Therefore, it is respectfully suggested that rejection of Claim 1, and all claims dependent therefrom, should be withdrawn.

As per Claims 2-3 and 7, Applicants submit that Esposto does not teach or suggest that “the first and second magnets are substantially disk shaped” (Claim 2) and that “the first and second magnets are substantially flat” (Claim 3). By contrast in Esposto an annular magnet shape is used (Col. 3, lines 6-8). Further, Applicants submit that Esposto does not teach or suggest that “said first and second magnets are neodymium iron boron magnets” (Claim 7). If the Examiner believes otherwise, Applicants respectfully request that the Examiner refer to specific teachings in Esposto that show all of the above limitations of each of the Claims 2-3 and 7. Therefore, it is respectfully suggested that rejection of Claims 2-3, 7 and all claims dependent therefrom, should be withdrawn.

Regarding Claim 8, Esposto does not teach or suggest that “said second seat is positioned on said first seat to enclose said first magnet therein but does not occlude said annular opening”. In Esposto there is no second set positioned on element 1. First magnet 8 is not enclosed by a first seat positioned on a second seat. Therefore, it is respectfully suggested that rejection of Claim 18 and all claims dependent therefrom, should be withdrawn.

Regarding Claim 15, for reasons discussed in relation to Claim 1, Applicants submit that Esposto does not teach or suggest “a second diaphragm having a second coil thereon formed on a

periphery of said first diaphragm", Esposto does not teach or suggest a first seat having an annular first wall extending therefrom and encircling a first magnet having a flat structure therein, "said first wall and said first magnet defining an annular opening therebetween to allow said second coil to be moveably suspended therein and Esposto does not teach or suggest a second seat having a second annular wall extending therefrom and encircling a second magnet having a flat structure, "said second wall and said second magnet defining an annular gap to allow said first coil to be moveably suspended therein", as required by Claim 15. If the Patent and Trademark Office believes otherwise, Applicants respectfully request that the Patent and Trademark Office refer to specific teachings in Esposto that show all of the above limitations of each of the Claim 15. Therefore, it is respectfully suggested that rejection of Claim 15 and all claims dependent therefrom, should be withdrawn.

Regarding Claim 16, as discussed in relation to Claim 2, Esposto does not teach or suggest that "the first and second magnets have a substantially disk shaped structure" (Claim 16). If the Examiner believes otherwise, Applicants respectfully request that the Examiner refer to specific teachings in Esposto that show all of the above limitations of each of the Claim 16. Therefore, it is respectfully suggested that rejection of Claim 16 and all claims dependent therefrom, should be withdrawn.

As per Claim 17, Esposto does not teach or suggest a first seat and second seat, wherein "said second seat is positioned on said first seat to enclose said first magnet therein but does not occlude said annular gap". If the Examiner believes otherwise, Applicants respectfully request that the Examiner refer to specific teachings in Esposto that show all of the above limitations of

each of the Claim 17. Therefore, it is respectfully suggested that rejection of Claim 17 and all claims dependent therefrom, should be withdrawn.

As per Claim 18, Esposto does not teach or suggest that "said first and second magnets are magnetized after said second seat is positioned over said first seat". If the Examiner believes otherwise, Applicants respectfully request that the Examiner refer to specific teachings in Esposto that show all of the above limitations of each of the Claim 18. Therefore, it is respectfully suggested that rejection of Claim 18 and all claims dependent therefrom, should be withdrawn.

As per Claim 19, Esposto does not teach or suggest that "a plate is concentrically placed upon said second magnet, and said plate also accommodates a domed diaphragm thereon on a side opposing said second magnet". If the Examiner believes otherwise, Applicants respectfully request that the Examiner refer to specific teachings in Esposto that show all of the above limitations of each of the Claim 19. Therefore, it is respectfully suggested that rejection of Claim 19 and all claims dependent therefrom, should be withdrawn.

IV. Claim 20

Rejection of Claim 20 under 35 USC 103(a) as unpatentable over Esposto and Fincham and further in view of Paddock is respectfully traversed because for the above reasons the references do not teach all of the limitations of Claim 20. Further, Esposto does not teach or suggest "at least an aperture being defined through said first seat and being position between said first magnet and said first seat". Esposto does not teach or suggest "at least a void being defined through said second seat, said void being in substantial axial alignment with said aperture".

Esposito does not teach or suggest “at least an electrical conducting element passing through said void and said aperture”.

V. New Claims 21 and 22

New Claim 21 includes the limitation that application of electric current to the coils generates a magnetic flux path that is continuous through the annular gap and the annular opening. The references alone or in combination do not teach or suggest such limitations.

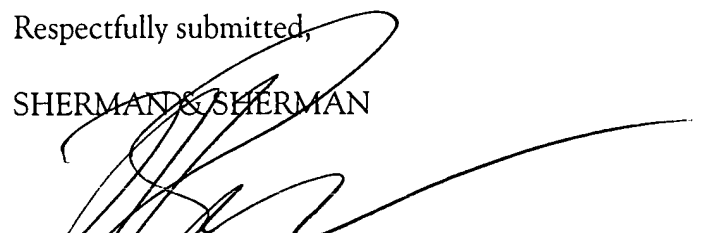
New Claim 22 includes the limitation that the first seat including said first magnetic structure, and the second seat including said second magnetic structure, form an essentially non-separable, single magnetic assembly. The references alone or in combination do not teach or suggest such limitations.

CONCLUSION

Examination and allowance of all the claims is respectfully requested. If it is believed that a telephone interview will help further the prosecution of this case, Applicants respectfully request that the undersigned attorney be contacted at listed telephone number.

Respectfully submitted,

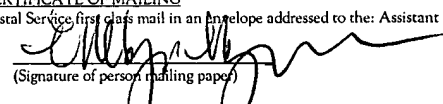
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CERTIFICATE OF MAILING

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

Please cancel Claim 4 without prejudice.

Please cancel Claim 14 without prejudice.

Please add the following new claims.

• --21. (New) The invention of Claim 1, wherein application of electric current to the coils generates a magnetic flux path that is continuous through the annular gap and the annular opening. --

 --22. (New) The invention of Claim 1, wherein the first seat including said first magnetic structure, and the second seat including said second magnetic structure, form an essentially non-separable, single magnetic assembly. --